The impact of model assumptions on results of computational mechanics in abdominal aortic aneurysm

Abstract:
Objective - In principle, superiority of computational wall stress analyses compared to the maximum diameter criterion for rupture risk evaluation of AAA has been demonstrated. However, the results of finite element analyses should be evaluated carefully because computational strains and stresses are highly dependent on the quality and complexity of each step of AAA simulation. Unfortunately, most clinically active vascular specialists are not familiar with the processes of computational mechanics to evaluate quality of AAA simulations. For better understanding and to provide insights in computational biomechanics of AAA the impact of different computational model assumptions on results of simulation are explained and demonstrated.

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